

# Update on PMCV/CMS in wild salmon in Norway



Åse Helen Garseth  
Norwegian Veterinary Institute



**Veterinærinstituttet**  
Norwegian Veterinary Institute



# CMS/PMCV in wild Atlantic salmon

- CMS histopathology detected in wild salmon (2001/2002)
- PMCV results included in scientific review:
  - Testing of wild salmon broodfish (2007-2012)
  - 3 of ~1250 were PMCV positive

New information:

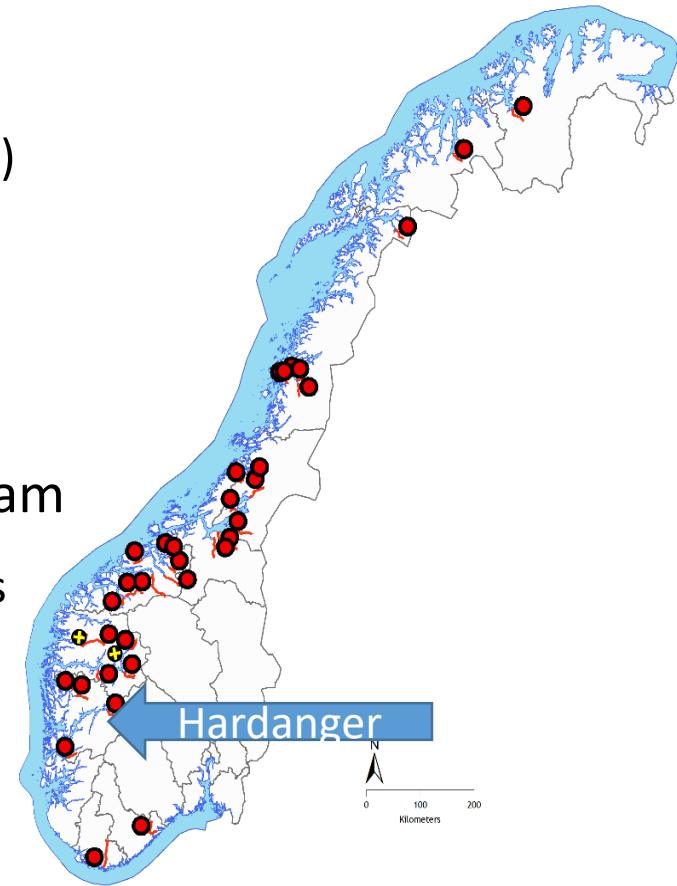
In 2016 the Norwegian Genebank for wild Atlantic salmon included PMCV in test program

2016: Overall 7 of 125 wild salmon were PMCV-pos

- Hardanger region 7 of 93

2017: Overall 1 of 146 wild salmon PMCV-pos

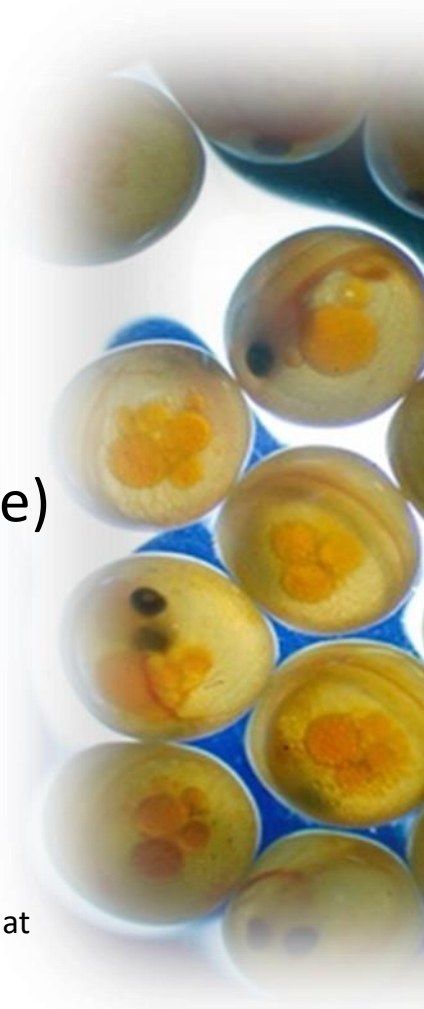
- Hardanger 1 of 48



# Genebank:

## In-house study of vertical transmission

- Hardanger region 2016:
  - 7 of 93 broodfish PMCV positive (Ct 20.5-34.1)
- Tested 2x60 offspring from 7 families
  - 60 yolk sac fry (at Norwegian Veterinary Institute)
    - PMCV not detected
  - 60 fingerlings (at Patogen Analyse AS)
    - PMCV not detected\*
  - 3rd sampling is planned for one of the families
- \* Updated info: Patogen Analyse AS confirms that there was no amplification beyond cut off at Ct-value 37



# Genebank: Sequencing & phylogenetics

Figure 1a: Sekstskjops-PMCV 30F1-11-14-15-5 (primersett1\_2)

Primary objective was to investigate

## 1. Transmission in tanks?

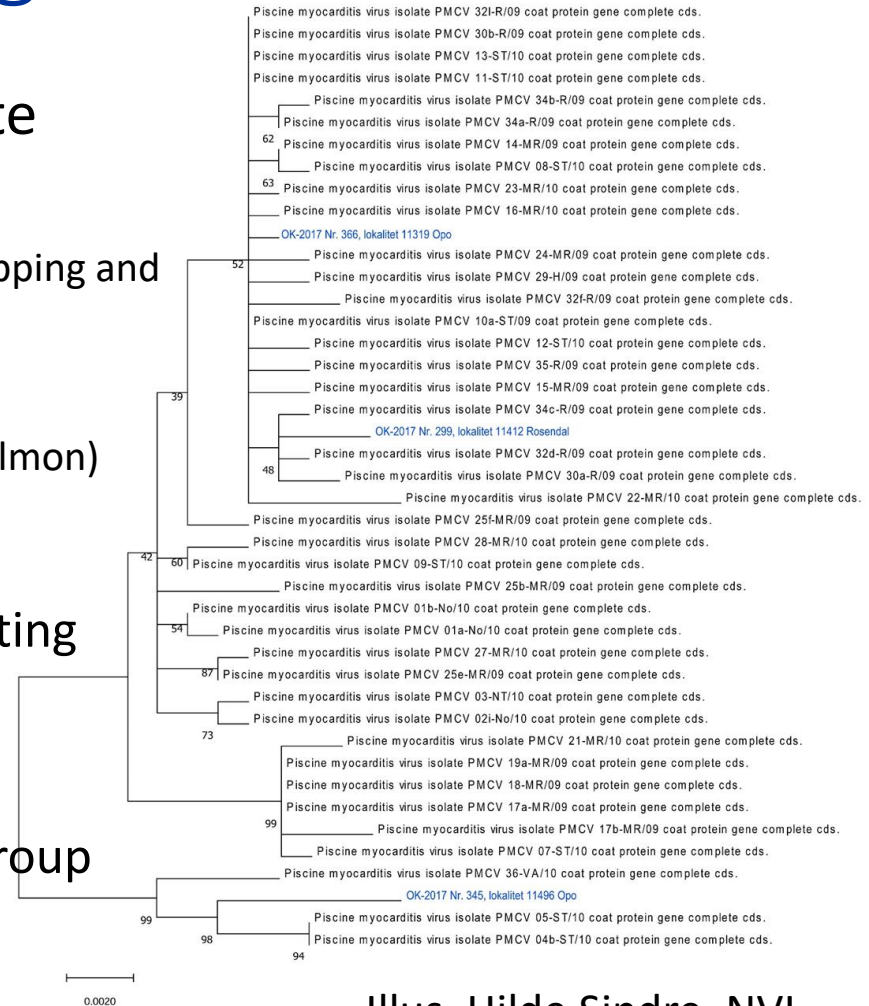
(Since brood fish are kept in tanks prior to stripping and health control)

## 2. Contamination

(To possibly «save» extremely valuable wild salmon)

Results:

- 1: PMCV-sequences from two cohabitating salmon were not similar
- 2: to high ct-values
- Additional result: Wild salmon PMCV group with farmed salmon PMCV.



Veterinærinstituttet  
Norwegian Veterinary Institute

Illus. Hilde Sindre, NVI



# Institute of Marine Research: PMCV in juvenile salmon in rivers

## Found PMCV in fingerlings:

- Eidfjord River 2% (N=176)
- Uskedal River 32% (N=91)

## Keep in mind:

- The Hardanger region is influenced by farmed escapees
- Origin of PMCV-positive fingerlings is unknown
  - Wild, farmed, wild-farmed hybrids?





Åse Helen Garseth

Veterinarian, PhD Aquatic veterinary medicine

Norwegian Veterinary Institute

Department of environmental and biosecurity measures

P.O. box 5695 Sluppen

N-7485 Trondheim

Norway

Phone: 23216000

[ase-helen.garseth@vetinst.no](mailto:ase-helen.garseth@vetinst.no) | [www.vetinst.no](http://www.vetinst.no)



**Veterinærinstituttet**  
Norwegian Veterinary Institute

